AD-A102 288 ARMY ELECTRONICS RESEARCH AND DEVELOPMENT COMMAND WS--ETC F/G 4/2
14824B LANCE, MISSILE NUMBER 5339, ROUND NUMBER 366-AST, 19 JUN--ETC(U)
JUN 81 D C KELLER

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REPORT DOCUMENTATION PAGE

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19. KEY WORDS (Continue on reverse side if necessary and identify by block number)

20. ABSTRACT (Continue on reverse side if necessary and identify by block number)

Meteorological data gathered for the launching of the 14824B LANCE, Missile No. 5339, Round No. 366-AST, presented in tabular form.

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UNCLASSIFIED 410662

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CONTENTS

INTRODUCTION

14824B LANCE, Missile Number 5339, Round Number 366-AST, was launched from LC-39, White Sands Missile Range (WSMR), New Mexico, at 1434:52 MDT, 19 June 1981. The scheduled launch time was 1430 MDT.

DISCUSSION

Meteorological data were recorded and reduced by the White Sands Meteorological Team, Atmospheric Sciences Laboratory (ASL), White Sands missile Range, New Mexico. The data were obtained by the following methods:

1. Observations:

a. Surface

(1) Standard surface observations to include pressure, temperature ($^{\circ}C$), relative humidity, dew point ($^{\circ}C$), density (gm/m^3), wind direction and speed, and cloud cover were made at the LC-39 Met Site at T-0 minutes.

(2) Monitor of wind speed and direction from one anemometer was provided in the launch control room.

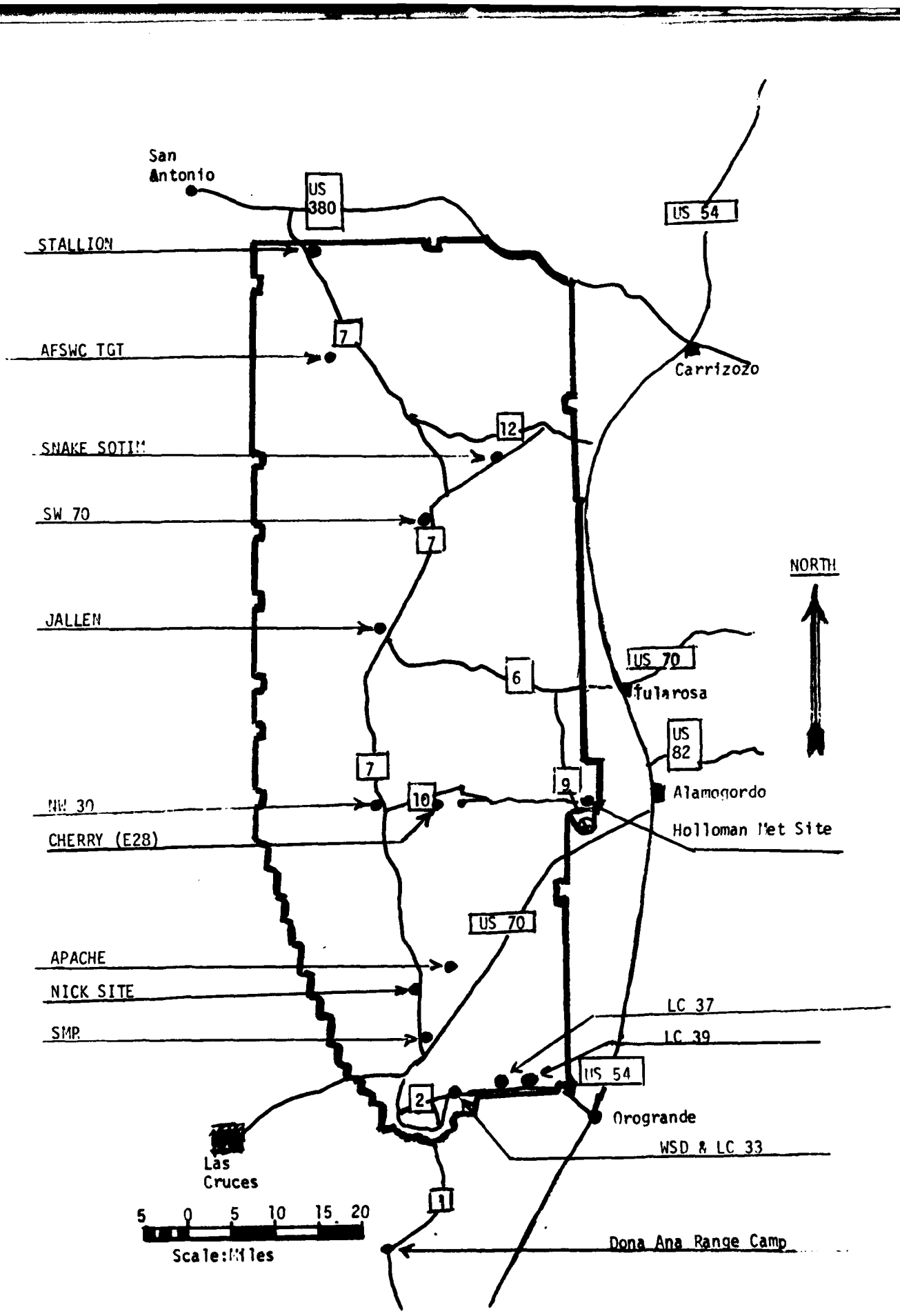
b. Upper Air:

(1) Low level wind data were obtained from RAPTS T-9 pibal observation at:

SITE AND ALTITUDE	
LC-39	2760 Meters

(2) Air structure data (rawinsonde) were collected at the following Met Sites. Data were collected from surface to high as possible in 500-feet increments.

SITE AND TIME	
WSD	1435 MDT
LC-37	1730 MDT
JAL	1300 MDT


San Antonio
US 380
US 54
STALLION
AFSWC TGT
Carrizozo
SNAKE SOTIM
SW 70
JALLEN
NORTH
US 70
Tularosa
US 82
Alamogordo
NW 30
CHERRY (E28)
Holloman Met Site
US 70
APACHE
NICK SITE
SMP
LC 37
LC 39
US 54
Orogrande
WSD & LC 33
Las Cruces
Dona Ana Range Camp
5 0 5 10 15 20
Scale: Miles

PROJECT SURFACE OBSERVATION

TABLE 1 STATION LC-39

DATE 19 (DAY) June (MONTH) 1981 (YEAR) X= 530,938.82 Y= 186,564.96 H= 4063.75

TIME M D I	PRESSURE mbs	TEMPERATURE °F	TEMPERATURE °C	DEW POINT °F	DEW POINT °C	RELATIVE HUMIDITY %	DENSITY gm/m³	WIND DIRECTION degs Tn	WIND SPEED kts	WIND CHARACTER kts	VISIBILITY
1434	877.0		38.1		5.5	14	974	250	02		50+

OBSTRUCTIONS TO VISIBILITY	CLOUDS 1st LAYER AMT	1st LAYER TYPE	1st LAYER HGT	2nd LAYER AMT	2nd LAYER TYPE	2nd LAYER HGT	3rd LAYER AMT	3rd LAYER TYPE	3rd LAYER HGT	REMARKS
C	L E	A R								

PSYCHROMETRIC COMPUTATION

TIME: MDT	1434		
DRY BULB TEMP.	38.1		
WET BULB TEMP.	17.9		
WET BULB DEPR.	20.2		
DEW POINT	5.5		
RELATIVE HUMID.	14		

PILOT BALLOON MEASURED WIND DATA

TABLE 2

RELEASED FROM LC-39 DATE 19 June 1981 TIME 1440 MDT

COORDINATES (WSTM) X= 530,938.82 Y= 186,564.96 H= 4063.75

NOTE: WIND DIRECTIONS ARE REFERENCED TO _____.

HEIGHTS ARE METERS AGL X OR FEET AGL _____.

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
SFC	250	02
60	255	01
120	268	01
180	C A L M	
240	037	01
300	048	01
360	054	01
420	101	01
480	189	01
540	203	02
600	207	03
660	210	05
720	203	06
780	199	08
840	196	09
900	195	11
960	193	12
1020	194	13
1080	196	14
1140	197	14
1200	198	14
1260	200	15
1320	199	14
1380	198	13
1440	196	12
1500	195	11
1560	193	10
1620	189	08
1680	184	08
1740	178	06

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS
1800	170	06
1860	161	05
1920	165	05
1980	170	05
2040	175	05
2100	180	05
2160	183	05
2220	180	04
2280	177	04
2340	172	03
2400	165	02
2460	164	02
2520	173	01
2580	C A L M	
2640	325	01
2700	329	02
2760	293	02

HEIGHT AGL	DIRECTION DEGREES	SPEED KNOTS

TABLE 3

COMPUTER MET MESSAGES

19 June 1981

WSD 1435 MDT

METCM1324064

192060122878

00213002	31050878
01286003	30970868
02223001	30750845
03383003	30360808
04394003	29870763
05459006	29370720
06398009	28900680
07397008	28440640
08446007	27980603
09254010	27500567
10569010	27060533
11636011	26770500
12578009	26330454
13565010	25580398
14596015	24740348
15568021	24040302
16571018	23400262
17578012	22700226
18545017	22070194
19564013	21430166
20535014	20860142
21578013	20440120
22572017	20260102
23056007	20490086
24157008	20770073
25161007	21140062
26183015	21550053

JAL 1300 MDT

METCM1332065

191900124876

00356002	31200876
01326009	30800866
02277007	30440843
03243001	30080805
04627005	29710761
05570002	29230718
06485009	28780677
07402011	28360638
08412009	27930600
09437009	27440564
10531010	27000530
11581009	26770498
12528007	26250452
13549017	25470396
14559020	24642346
15578022	23960301
16042015	23200260
17599015	22520224
18540021	21990192
19551018	21300165
20519010	20760140
21599015	20410119
22543010	20250100
23558011	20290085
24112010	20770072
25194007	21260061
26176016	21590052

STATION ALTITUDE 3989.00 FEET MSL
19 JUNE 81 1435 HRS MDT
ASCENSION NO. 399

SIGNIFICANT LEVEL DATA
17000Z0399
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 4

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
877.8	3989.0	36.9	5.0	14.0
850.0	4947.4	33.1	10.4	25.0
736.8	9097.7	21.4	2.6	29.0
700.0	10544.8	17.2	-.1	31.0
627.8	13553.0	9.1	-7.1	31.0
534.6	17835.3	-2.9	-14.9	39.0
500.0	19569.3	-5.9	-21.4	28.0
486.2	20290.2	-6.0	-22.8	25.0
400.0	25210.6	-17.3	-30.7	30.0
340.4	29111.9	-27.5	-37.4	38.0
300.0	32069.9	-33.3	-43.7	34.0
265.4	34866.8	-39.8	-50.4	31.0
250.0	36204.2	-42.7		
226.4	38391.4	-46.4		
200.0	41074.9	-51.4		
172.6	44187.2	-57.3		
150.0	47073.2	-63.1		
127.2	50384.3	-67.4		
106.2	53933.3	-71.8		
100.0	55106.8	-70.8		
70.0	62186.9	-64.9		
50.0	69108.1	-56.2		
42.8	72371.2	-56.5		
32.8	78066.5	-47.8		
30.0	80018.8	-46.8		
23.0	85860.3	-45.8		
20.0	88967.5	-41.9		

STATION ALTITUDE 3989.00 FEET MSL
19 JUNE 81 1435 HRS MDT
ASCENSION NO. 399

UPPER AIR DATA
1700020399
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 5

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
3989.0	877.8	36.9	5.0	14.0	982.6	687.3	120.0	1.9	1.000253
4000.0	877.5	36.9	5.1	14.1	982.3	687.2	120.1	1.9	1.000254
4500.0	862.9	34.9	8.5	19.9	971.1	685.4	123.6	1.6	1.000261
5000.0	848.5	33.0	10.3	25.1	960.2	683.5	129.1	1.3	1.000265
5500.0	834.0	31.5	9.4	25.5	948.4	681.9	187.5	1.0	1.000260
6000.0	819.7	30.1	8.5	26.0	936.8	680.2	214.2	2.0	1.000255
6500.0	805.7	28.7	7.6	26.5	925.3	678.5	213.9	2.9	1.000250
7000.0	792.0	27.3	6.7	27.0	914.0	676.9	210.1	2.5	1.000245
7500.0	778.5	25.9	5.7	27.5	902.8	675.2	219.7	2.2	1.000240
8000.0	765.2	24.5	4.8	27.9	891.8	673.5	220.3	2.0	1.000235
8500.0	752.1	23.1	3.8	28.4	880.9	671.9	225.9	2.5	1.000231
9000.0	739.3	21.7	2.8	28.9	870.2	670.2	248.7	4.4	1.000227
9500.0	726.4	20.2	1.9	29.6	859.4	668.5	250.0	5.7	1.000222
10000.0	713.6	18.8	1.0	30.2	848.6	666.8	248.6	6.7	1.000218
10500.0	701.1	17.3	.0	30.9	838.0	665.1	237.6	7.2	1.000214
11000.0	688.6	16.0	-1.1	31.0	827.1	663.5	228.9	8.1	1.000210
11500.0	676.2	14.6	-2.3	31.0	816.2	661.8	224.6	9.3	1.000206
12000.0	664.1	13.3	-3.5	31.0	805.5	660.2	224.2	9.0	1.000201
12500.0	652.2	11.9	-4.6	31.0	794.9	658.6	223.5	8.3	1.000197
13000.0	640.5	10.6	-5.8	31.0	784.5	657.0	224.0	7.7	1.000193
13500.0	629.0	9.2	-7.0	31.0	774.3	655.4	228.9	7.5	1.000190
14000.0	617.4	7.8	-7.9	31.8	763.8	653.7	238.5	7.2	1.000186
14500.0	605.9	6.4	-8.7	32.8	753.4	652.1	251.7	7.0	1.000183
15000.0	594.6	5.0	-9.6	33.7	743.2	650.4	266.4	7.4	1.000180
15500.0	583.6	3.6	-10.5	34.6	733.2	648.7	278.8	8.3	1.000177
16000.0	572.7	2.2	-11.4	35.6	723.3	647.0	286.4	9.2	1.000174
16500.0	562.1	.8	-12.3	36.5	713.5	645.4	291.9	10.1	1.000171
17000.0	551.6	-.6	-13.3	37.4	703.9	643.7	298.1	10.5	1.000168
17500.0	541.4	-2.0	-14.2	38.4	694.4	642.0	307.0	10.4	1.000165
18000.0	531.2	-3.2	-15.5	38.0	684.6	640.5	324.8	9.9	1.000162
18500.0	521.1	-4.0	-17.3	34.8	673.8	639.4	348.6	10.3	1.000158
19000.0	511.1	-4.9	-19.2	31.6	663.1	638.4	354.9	10.7	1.000155
19500.0	501.3	-5.8	-21.1	28.4	652.7	637.3	358.8	11.0	1.000151
20000.0	491.7	-6.0	-22.2	26.2	640.6	637.1	346.7	10.1	1.000148
20500.0	482.2	-6.5	-23.1	25.2	629.4	636.4	334.4	9.7	1.000145
21000.0	472.7	-7.6	-23.9	25.7	619.8	635.0	331.4	9.6	1.000143
21500.0	463.4	-8.8	-24.6	26.2	610.2	633.6	328.5	9.5	1.000140
22000.0	454.3	-9.9	-25.4	26.7	600.9	632.3	326.2	9.4	1.000138
22500.0	445.4	-11.1	-26.2	27.2	591.7	630.9	323.8	9.2	1.000136
23000.0	436.7	-12.2	-27.0	27.8	582.6	629.5	321.3	9.0	1.000133

STATION ALTITUDE 3989.00 FEET MSL
19 JUNE 81 1435 HRS MDT
ASCENSION NO. 399

UPPER AIR DATA
1700020399
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 5 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
23500.0	428.1	-13.4	-27.8	28.3	573.7	628.1	319.3	8.9	1.000131
24000.0	419.7	-14.5	-28.7	28.8	565.0	626.7	318.7	9.2	1.000129
24500.0	411.4	-15.7	-29.5	29.3	556.4	625.3	317.7	9.5	1.000127
25000.0	403.4	-16.8	-30.3	29.8	547.9	623.9	314.6	9.9	1.000125
25500.0	395.2	-18.1	-31.1	30.6	539.5	622.4	312.6	10.3	1.000123
26000.0	387.2	-19.4	-31.9	31.6	531.2	620.7	316.9	11.2	1.000121
26500.0	379.2	-20.7	-32.8	32.6	523.1	619.1	320.8	12.0	1.000119
27000.0	371.5	-22.0	-33.6	33.7	515.0	617.5	326.1	12.9	1.000117
27500.0	363.9	-23.3	-34.5	34.7	507.1	615.9	330.7	13.8	1.000115
28000.0	356.4	-24.6	-35.4	35.7	499.4	614.3	330.7	14.9	1.000113
28500.0	349.1	-25.9	-36.3	36.7	491.8	612.7	330.8	15.9	1.000111
29000.0	342.0	-27.2	-37.2	37.8	484.3	611.0	330.4	17.5	1.000109
29500.0	334.8	-28.3	-38.2	37.5	476.2	609.7	330.0	19.1	1.000107
30000.0	327.7	-29.2	-39.3	36.8	468.0	608.5	329.0	19.5	1.000106
30500.0	320.8	-30.2	-40.4	36.1	459.9	607.3	327.7	19.3	1.000104
31000.0	314.0	-31.2	-41.4	35.4	452.1	606.0	325.6	18.7	1.000102
31500.0	307.4	-32.2	-42.5	34.8	444.3	604.8	322.4	18.0	1.000100
32000.0	300.9	-33.2	-43.5	34.1	436.7	603.6	320.5	17.8	1.000098
32500.0	294.4	-34.3	-44.7	33.5	429.3	602.1	321.5	18.7	1.000096
33000.0	288.0	-35.5	-45.9	33.0	422.1	600.7	322.5	19.5	1.000095
33500.0	281.8	-36.6	-47.1	32.5	415.0	599.2	323.1	19.2	1.000093
34000.0	275.7	-37.8	-48.3	31.9	408.0	597.7	323.7	18.8	1.000091
34500.0	269.7	-38.9	-49.5	31.4	401.1	596.2	322.7	18.3	1.000090
35000.0	263.8	-40.1	-51.5	27.9**	394.3	594.8	320.9	17.6	1.000088
35500.0	258.0	-41.2	-56.8	16.3**	387.4	593.4	319.7	17.0	1.000086
36000.0	252.3	-42.3	-67.0	4.7**	380.6	592.0	319.3	16.6	1.000085
36500.0	246.7	-43.2			373.7	590.8	319.7	16.0	1.000083
37000.0	241.1	-44.0			366.7	589.7	324.2	15.1	1.000082
37500.0	235.7	-44.9			359.8	588.6	329.2	14.3	1.000080
38000.0	230.5	-45.7			353.0	587.5	327.2	13.1	1.000079
38500.0	225.3	-46.6			346.4	586.4	324.0	11.8	1.000077
39000.0	220.1	-47.5			339.9	585.2	315.9	11.0	1.000076
39500.0	215.1	-48.5			333.5	584.0	305.5	10.8	1.000074
40000.0	210.2	-49.4			327.2	582.7	301.5	11.5	1.000073
40500.0	205.4	-50.3			321.1	581.5	304.6	12.8	1.000072
41000.0	200.7	-51.3			315.1	580.3	307.0	14.2	1.000070
41500.0	196.0	-52.2			309.1	579.1	308.6	15.9	1.000069
42000.0	191.4	-53.2			303.1	577.8	309.8	17.5	1.000068
42500.0	187.0	-54.1			297.3	576.6	311.1	17.9	1.000066
43000.0	182.6	-55.0			291.6	575.3	312.6	17.6	1.000065

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 3989.00 FEET MSL
19 JUNE 81 1435 HRS MDT
ASCENSION NO. 399

UPPER AIR DATA
1700020399
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 5 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
43500.0	176.3	-56.0			286.0	574.1	313.4	16.9	1.000064
44000.0	174.1	-56.9			280.6	572.8	313.3	15.5	1.000062
44500.0	170.0	-57.9			275.2	571.5	313.7	14.2	1.000061
45000.0	165.9	-58.9			269.8	570.2	316.1	13.2	1.000060
45500.0	161.9	-59.9			264.6	568.9	318.8	12.2	1.000059
46000.0	158.0	-60.9			259.4	567.5	319.6	11.7	1.000058
46500.0	154.2	-61.9			254.4	566.2	320.1	11.4	1.000057
47000.0	150.5	-63.0			249.5	564.8	317.4	11.5	1.000056
47500.0	146.8	-63.7			244.2	563.9	311.2	12.6	1.000054
48000.0	143.2	-64.3			238.9	563.0	306.0	13.8	1.000053
48500.0	139.7	-65.0			233.8	562.1	301.9	15.1	1.000052
49000.0	136.3	-65.6			228.7	561.2	298.4	16.4	1.000051
49500.0	132.9	-66.3			223.8	560.4	298.1	17.7	1.000050
50000.0	129.7	-66.9			219.0	559.5	303.2	18.8	1.000049
50500.0	126.5	-67.5			214.3	558.6	307.6	20.2	1.000048
51000.0	123.3	-68.2			209.5	557.8	313.1	19.9	1.000047
51500.0	120.2	-68.8			204.9	556.9	319.5	19.1	1.000046
52000.0	117.2	-69.4			200.3	556.1	325.7	18.3	1.000045
52500.0	114.2	-70.0			195.9	555.2	327.0	15.2	1.000044
53000.0	111.4	-70.6			191.6	554.4	328.9	12.2	1.000043
53500.0	108.6	-71.3			187.3	553.5	329.2	10.6	1.000042
54000.0	105.8	-71.7			183.1	552.9	327.3	10.4	1.000041
54500.0	103.2	-71.3			178.1	553.5	325.3	10.2	1.000040
55000.0	100.5	-70.9			173.2	554.1	326.5	11.4	1.000039
55500.0	98.0	-70.5			168.5	554.6	327.9	12.8	1.000038
56000.0	95.6	-70.1			164.0	555.2	329.9	13.9	1.000037
56500.0	93.2	-69.6			159.6	555.8	336.6	13.2	1.000036
57000.0	90.9	-69.2			155.3	556.3	343.9	12.7	1.000035
57500.0	88.6	-68.8			151.1	556.9	356.3	11.1	1.000034
58000.0	86.4	-68.4			147.1	557.5	21.1	9.2	1.000033
58500.0	84.3	-68.0			143.1	558.0	50.5	9.5	1.000032
59000.0	82.2	-67.6			139.3	558.6	65.5	10.2	1.000031
59500.0	80.1	-67.1			135.5	559.2	76.3	11.0	1.000030
60000.0	78.2	-66.7			131.9	559.7	84.9	11.9	1.000029
60500.0	76.2	-66.3			128.3	560.3	90.4	11.0	1.000029
61000.0	74.3	-65.9			124.9	560.9	96.7	10.2	1.000028
61500.0	72.5	-65.5			121.6	561.4	104.2	9.2	1.000027
62000.0	70.7	-65.1			118.3	562.0	114.2	7.8	1.000026
62500.0	68.9	-64.5			115.1	562.7	127.9	6.8	1.000026
63000.0	67.3	-63.9			112.0	563.6	134.2	5.2	1.000025

STATION ALTITUDE 3989.00 FEET MSL
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UPPER AIR DATA
1700020399
WHITE SANDS

TABLE 5 CON'T

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
63500.0	65.7	-63.2			109.0	564.4	141.7	3.4	1.000024
64000.0	64.1	-62.6			106.1	565.3	156.1	1.9	1.000024
64500.0	62.6	-62.0			103.2	566.1	95.9	3.7	1.000023
65000.0	61.1	-61.4			100.4	566.9	82.0	6.8	1.000022
65500.0	59.6	-60.7			97.7	567.8	83.4	10.1	1.000022
66000.0	58.2	-60.1			95.1	568.6	92.9	13.9	1.000021
66500.0	56.8	-59.5			92.5	569.5	98.2	18.0	1.000021
67000.0	55.4	-58.8			90.1	570.3	101.2	18.4	1.000020
67500.0	54.1	-58.2			87.6	571.1	104.2	16.9	1.000020
68000.0	52.8	-57.6			85.3	572.0	107.8	15.4	1.000019
68500.0	51.5	-57.0			83.0	572.8	101.4	12.4	1.000018
69000.0	50.3	-56.3			80.8	573.6	90.0	9.6	1.000018
69500.0	49.1	-56.2			78.8	573.8	77.1	8.3	1.000018
70000.0	47.9	-56.3			77.0	573.7	81.6	10.7	1.000017
70500.0	46.8	-56.3			75.2	573.7	84.5	13.1	1.000017
71000.0	45.7	-56.4			73.4	573.6	85.9	15.1	1.000016
71500.0	44.6	-56.4			71.7	573.5	86.3	16.7	1.000016
72000.0	43.6	-56.5			70.0	573.5	86.7	18.2	1.000016
72500.0	42.5	-56.3			68.3	573.7	85.0	19.3	1.000015
73000.0	41.6	-55.5			66.5	574.7	82.5	20.3	1.000015
73500.0	40.6	-54.8			64.8	575.7	80.2	21.2	1.000014
74000.0	39.7	-54.0			63.1	576.7	80.6	23.0	1.000014
74500.0	38.7	-53.2			61.4	577.7	81.2	25.0	1.000014
75000.0	37.9	-52.5			59.8	578.7	81.8	27.0	1.000013
75500.0	37.0	-51.7			58.2	579.7	82.6	27.9	1.000013
76000.0	36.1	-51.0			56.6	580.7	83.5	28.7	1.000013
76500.0	35.3	-50.2			55.1	581.7	84.2	29.6	1.000012
77000.0	34.5	-49.4			53.7	582.7	86.6	29.5	1.000012
77500.0	33.7	-48.7			52.3	583.7	89.3	29.3	1.000012
78000.0	32.9	-47.9			50.9	584.7	92.1	29.1	1.000011
78500.0	32.2	-47.6			49.7	585.1	93.9	28.6	1.000011
79000.0	31.4	-47.3			48.5	585.4	95.5	28.0	1.000011
79500.0	30.7	-47.1			47.3	585.8	97.1	27.4	1.000011
80000.0	30.0	-46.8			46.2	586.1	94.4	26.3	1.000010
80500.0	29.4	-46.7			45.2	586.2	89.1	25.2	1.000010
81000.0	28.7	-46.6			44.1	586.3	83.4	24.3	1.000010
81500.0	28.0	-46.5			43.1	586.4	84.2	23.9	1.000010
82000.0	27.4	-46.5			42.1	586.6	90.6	24.0	1.000009
82500.0	26.8	-46.4			41.2	586.7	96.9	24.4	1.000009
83000.0	26.2	-46.3			40.2	586.8	103.0	25.1	1.000009

STATION ALTITUDE 3989.00 FEET MSL
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UPPER AIR DATA
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WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 5 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
83500.0	25.6	-46.2			39.3	586.9	109.1	26.1	1.000009
84000.0	25.0	-46.1			38.4	587.0	114.6	27.3	1.000009
84500.0	24.5	-46.0			37.5	587.1	119.6	28.7	1.000008
85000.0	23.9	-45.9			36.7	587.2	116.3	27.1	1.000008
85500.0	23.4	-45.9			35.8	587.3	112.6	25.5	1.000008
86000.0	22.9	-45.6			35.0	587.6	108.4	24.0	1.000008
86500.0	22.3	-45.0			34.1	588.4			1.000008
87000.0	21.9	-44.4			33.3	589.3			1.000007
87500.0	21.4	-43.7			32.4	590.1			1.000007
88000.0	20.9	-43.1			31.6	590.9			1.000007
88500.0	20.4	-42.5			30.8	591.7			1.000007

STATION ALTITUDE 3989.00 FEET MSL
19 JUNE 81 1435 HRS MDT
ASCENSION NO. 399

MANDATORY LEVELS
1700020399
WHITE SANDS

GEODETIC COORDINATES
32.40043 LAT DEG
106.37033 LON DEG

TABLE 6

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4944.	33.1	10.4	25.	128.4	1.3
800.0	6723.	28.1	7.2	27.	212.3	2.7
750.0	8583.	22.9	3.7	29.	227.0	2.6
700.0	10534.	17.2	-.1	31.	236.7	7.3
650.0	12588.	11.7	-4.9	31.	223.3	8.2
600.0	14761.	5.7	-9.2	33.	259.8	7.2
550.0	17070.	-.8	-13.4	38.	299.6	10.5
500.0	19541.	-5.9	-21.4	28.	357.5	10.9
450.0	22232.	-10.5	-25.8	27.	325.0	9.3
400.0	25168.	-17.3	-30.7	30.	313.5	10.0
350.0	28398.	-25.7	-36.2	37.	330.8	15.8
300.0	32005.	-33.3	-43.7	34.	320.6	17.9
250.0	36124.	-42.7			319.2	16.4
200.0	40974.	-51.4			307.2	14.4
175.0	43785.	-56.7			313.3	15.8
150.0	46944.	-63.1			316.7	11.6
125.0	50582.	-67.8			309.5	20.4
100.0	54934.	-70.8			326.7	11.6
80.0	59313.	-67.1			75.9	11.0
70.0	61971.	-64.9			118.1	7.4
60.0	65086.	-60.9			78.5	8.6
50.0	68845.	-56.2			87.8	9.2
40.0	73501.	-54.3			80.2	22.1
30.0	79673.	-46.8			94.6	26.4
25.0	83645.	-46.1			114.4	27.3
20.0	88545.	-41.9				

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
19 JUNE 81 1730 HRS MDT
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SIGNIFICANT LEVEL DATA
1700180130
LC-37

TABLE 7

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT
873.3	4051.4	37.5	-6.1	6.0
850.0	4858.9	35.3	5.7	16.0
777.8	7470.9	28.0	-.1	16.0
700.0	10486.7	19.0	-7.4	16.0
673.6	11563.1	15.5	-10.2	16.0
575.6	15841.9	2.8	-16.2	23.0
515.6	18730.9	-4.6	-22.5	23.0
500.0	19525.2	-5.2	-26.4	17.0
483.2	20405.8	-6.4	-28.0	16.0
459.6	21688.7	-8.3	-29.6	16.0
444.4	22543.7	-10.5	-31.4	16.0
421.8	23856.8	-13.8	-33.5	17.0
400.0	25174.6	-17.3	-35.3	19.0
350.8	28356.6	-26.1	-39.5	27.0
337.6	29267.4	-27.7	-39.9	30.0
318.2	30661.7	-30.0	-45.6	20.0
300.0	32033.8	-33.2	-49.3	18.0
269.2	34509.7	-39.2		
250.0	36168.3	-42.4		
240.8	36999.3	-44.5		
230.0	38008.6	-45.9		
200.0	41033.4	-51.9		
172.4	44175.2	-56.1		
149.4	47126.1	-63.4		

STATION ALTITUDE 4051.37 FEET MSL
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GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 8

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.4	873.3	37.5	-6.1	6.0	977.7	687.2	200.0	4.9	1.000233
4500.0	860.3	36.3	1.8	11.6	965.6	686.3	200.6	5.4	1.000243
5000.0	845.9	34.9	5.4	16.0	952.8	685.1	201.1	6.0	1.000248
5500.0	831.7	33.5	4.3	16.0	941.2	683.5	201.5	6.6	1.000243
6000.0	817.7	32.1	3.1	16.0	929.8	681.9	201.9	7.2	1.000238
6500.0	803.9	30.7	2.0	16.0	918.6	680.2	202.2	7.8	1.000234
7000.0	790.3	29.3	.9	16.0	907.4	678.6	204.2	8.0	1.000229
7500.0	777.0	27.9	-.2	16.0	896.5	677.0	207.8	7.9	1.000225
8000.0	763.6	26.4	-1.4	16.0	885.5	675.2	211.5	7.8	1.000221
8500.0	750.3	24.9	-2.6	16.0	874.7	673.5	213.3	7.9	1.000216
9000.0	737.3	23.4	-3.8	16.0	864.0	671.7	214.5	8.1	1.000212
9500.0	724.6	21.9	-5.0	16.0	853.5	670.0	215.6	8.3	1.000209
10000.0	712.0	20.5	-6.2	16.0	843.1	668.2	214.0	8.0	1.000205
10500.0	699.7	19.0	-7.4	16.0	832.8	666.5	210.6	7.4	1.000201
11000.0	687.3	17.3	-8.7	16.0	822.8	664.6	206.7	6.9	1.000198
11500.0	675.1	15.7	-10.0	16.0	812.9	662.6	204.5	6.4	1.000194
12000.0	662.9	14.2	-10.7	16.7	802.4	660.9	204.7	5.8	1.000191
12500.0	650.8	12.7	-11.3	17.5	791.9	659.2	217.9	5.8	1.000188
13000.0	639.0	11.2	-11.9	18.4	781.6	657.4	239.3	7.1	1.000186
13500.0	627.3	9.8	-12.6	19.2	771.4	655.7	243.9	8.5	1.000183
14000.0	615.9	8.3	-13.3	20.0	761.4	654.0	244.5	9.8	1.000180
14500.0	604.7	6.8	-14.1	20.8	751.6	652.2	252.1	10.0	1.000177
15000.0	593.7	5.3	-14.9	21.6	741.8	650.5	261.1	10.2	1.000175
15500.0	582.9	3.8	-15.7	22.4	732.3	648.7	278.4	9.8	1.000172
16000.0	572.1	2.4	-16.6	23.0	722.6	647.0	294.6	10.0	1.000169
16500.0	561.3	1.1	-17.7	23.0	712.3	645.5	309.1	10.2	1.000166
17000.0	550.8	-.2	-18.8	23.0	702.2	644.0	317.3	10.6	1.000163
17500.0	540.4	-1.4	-19.8	23.0	692.2	642.4	323.0	10.9	1.000161
18000.0	530.2	-2.7	-20.9	23.0	682.4	640.9	338.6	11.4	1.000158
18500.0	520.2	-4.0	-22.0	23.0	672.8	639.4	352.0	12.7	1.000155
19000.0	510.3	-4.8	-23.7	21.0	662.0	638.4	354.5	13.9	1.000152
19500.0	500.5	-5.2	-26.2	17.2	650.3	637.9	354.9	14.9	1.000149
20000.0	490.9	-5.8	-27.3	16.5	639.4	637.1	346.9	14.6	1.000146
20500.0	481.4	-6.5	-28.1	16.0	628.8	636.3	334.8	14.3	1.000143
21000.0	472.1	-7.3	-28.7	16.0	618.3	635.4	330.2	14.6	1.000141
21500.0	463.0	-8.0	-29.3	16.0	608.1	634.5	326.0	14.6	1.000138
22000.0	454.0	-9.1	-30.2	16.0	598.7	633.2	322.4	13.8	1.000136
22500.0	445.2	-10.4	-31.3	16.0	590.0	631.6	319.0	12.7	1.000134
23000.0	436.4	-11.6	-32.1	16.3	581.2	630.1	315.5	11.5	1.000132
23500.0	427.8	-12.9	-32.9	16.7	572.5	628.6	311.7	10.9	1.000130

STATION ALTITUDE 4051.37 FEET MSL
19 JUNE 81 1730 HRS MDT
ASCENSION NO. 130

UPPER AIR DATA
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TABLE 8 CON'T

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	419.4	-14.2	-33.7	17.2	584.0	627.0	308.5	10.5	1.000128
24500.0	411.0	-15.5	-34.4	18.0	555.6	625.4	307.7	10.2	1.000126
25000.0	402.8	-16.8	-35.1	18.7	547.3	623.8	307.6	10.0	1.000124
25500.0	394.7	-18.2	-35.7	19.8	539.1	622.1	309.2	10.2	1.000122
26000.0	386.6	-19.6	-36.2	21.1	531.0	620.4	310.5	10.4	1.000120
26500.0	378.7	-21.0	-36.8	22.3	523.0	618.7	311.2	11.0	1.000118
27000.0	371.0	-22.3	-37.5	23.6	515.2	617.0	312.0	11.4	1.000116
27500.0	363.4	-23.7	-38.2	24.8	507.5	615.3	314.7	11.3	1.000114
28000.0	356.0	-25.1	-38.9	26.1	499.9	613.6	317.4	11.3	1.000113
28500.0	348.7	-26.4	-39.5	27.5	492.1	612.1	329.3	11.8	1.000111
29000.0	341.4	-27.2	-39.7	29.1	483.6	611.0	340.4	12.9	1.000109
29500.0	334.3	-28.1	-40.7	28.3	475.1	609.9	353.6	15.0	1.000107
30000.0	327.3	-28.9	-42.7	24.7	466.7	608.9	2.0	17.1	1.000105
30500.0	320.4	-29.7	-44.9	21.2	458.5	607.9	5.6	17.9	1.000103
31000.0	313.6	-30.8	-46.5	19.5	450.7	606.5	11.9	16.1	1.000101
31500.0	307.0	-32.0	-47.8	18.8	443.3	605.1	25.6	12.3	1.000099
32000.0	300.4	-33.1	-49.2	18.0	436.0	603.6	38.9	7.8	1.000098
32500.0	293.9	-34.3	-52.0	14.6**	428.7	602.1	57.8	4.2	1.000096
33000.0	287.6	-35.5	-55.3	11.0**	421.6	600.5	6.6	3.3	1.000094
33500.0	281.4	-36.8	-59.5	7.3**	414.6	599.0	346.9	4.7	1.000092
34000.0	275.3	-38.0	-65.5	3.7**	407.7	597.5	350.1	6.3	1.000091
34500.0	269.3	-39.2	-90.6	.1**	401.0	595.9	349.5	6.8	1.000089
35000.0	263.4	-40.1			393.8	594.7	347.8	7.0	1.000088
35500.0	257.6	-41.1			386.7	593.4	345.6	7.1	1.000086
36000.0	251.9	-42.1			379.7	592.2	343.8	7.3	1.000085
36500.0	246.3	-43.2			373.2	590.7	348.8	9.3	1.000083
37000.0	240.8	-44.5			366.9	589.1	351.4	11.3	1.000082
37500.0	235.4	-45.2			359.7	588.2	349.2	13.2	1.000080
38000.0	230.1	-45.9			352.7	587.3	346.5	14.5	1.000079
38500.0	224.8	-46.9			346.1	586.0	338.7	13.2	1.000077
39000.0	219.7	-47.9			339.7	584.7	329.2	12.5	1.000076
39500.0	214.7	-48.9			333.4	583.4	319.0	12.7	1.000074
40000.0	209.8	-49.9			327.3	582.2	315.3	14.5	1.000073
40500.0	205.0	-50.8			321.2	580.9	314.5	16.8	1.000072
41000.0	200.3	-51.8			315.3	579.6	316.2	19.9	1.000070
41500.0	195.6	-52.5			308.9	578.7	315.5	22.6	1.000069
42000.0	191.1	-53.2			302.6	577.8	310.0	24.0	1.000067
42500.0	186.6	-53.9			296.4	576.9	312.0	22.5	1.000066
43000.0	182.2	-54.5			290.4	576.0	320.0	19.5	1.000065
43500.0	178.0	-55.2			284.5	575.1	324.1	19.6	1.000063

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

STATION ALTITUDE 4051.37 FEET MSL
19 JUNE 81 1730 HRS MDT
ASCENSION NO. 130

UPPER AIR DATA
1700180130
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 8 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	173.8	-55.9			278.7	574.3	328.0	20.0	1.000062
44500.0	169.7	-56.9			273.4	572.9	320.9	18.9	1.000061
45000.0	165.6	-58.1			268.4	571.2	311.9	18.2	1.000060
45500.0	161.7	-59.4			263.5	569.6			1.000059
46000.0	157.8	-60.6			258.6	568.0			1.000058
46500.0	154.0	-61.9			253.9	566.3			1.000057
47000.0	150.3	-63.1			249.3	564.6			1.000056

STATION ALTITUDE 4051.37 FEET MSL
19 JUNE 81 1730 HRS MDT
ASCENSION NO. 130

MANDATORY LEVELS
1700180130
LC-37

GEODETIC COORDINATES
32.40175 LAT DEG
106.31232 LON DEG

TABLE 9

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4855.	35.3	5.7	16.	201.0	5.8
800.0	6644.	30.3	1.7	16.	202.3	7.9
750.0	8515.	24.9	-2.6	16.	213.4	7.9
700.0	10476.	19.0	-7.4	16.	210.7	7.4
650.0	12537.	12.6	-11.3	18.	220.2	5.9
600.0	14713.	6.2	-14.4	21.	255.4	10.2
550.0	17023.	-.3	-18.8	23.	317.7	10.6
500.0	19497.	-5.2	-26.4	17.	355.0	15.0
450.0	22191.	-9.7	-30.7	16.	320.7	13.4
400.0	25132.	-17.3	-35.3	19.	308.1	10.1
350.0	28358.	-26.2	-39.5	27.	326.8	11.7
300.0	31969.	-33.2	-49.3	18.	39.6	7.6
250.0	36088.	-42.4			345.6	7.9
200.0	40933.	-51.9			316.3	20.0
175.0	43747.	-55.7			326.8	19.9
150.0	46916.	-63.2				

STATION ALTITUDE 4051.00 FEET MSL
19 JUNE 81 1300 HRS MDT
ASCENSION NO. 50

SIGNIFICANT LEVEL DATA
1700030050
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GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 10

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
876.0	4051.0	36.8	10.2	20.0
865.8	4399.1	32.1	4.8	18.0
850.0	4940.7	30.9	3.0	17.0
781.4	7381.7	24.1	-1.7	18.0
753.8	8410.9	23.0	-3.3	17.0
744.6	8760.7	21.5	-5.3	16.0
700.0	10500.1	16.4	-8.7	17.0
646.4	12701.7	10.7	-12.6	18.0
595.4	14928.0	5.1	-16.6	19.0
545.8	17231.0	-2.0	-18.9	26.0
529.6	18016.4	-3.5	-18.5	30.0
521.2	18430.9	-4.8	-21.8	25.0
500.0	19504.3	-5.1	-26.9	16.0
490.0	20024.9	-6.4	-28.0	16.0
454.4	21949.4	-10.4	-32.7	14.0
400.0	25132.6	-17.9	-36.3	18.0
356.8	27906.4	-24.9	-39.9	23.0
343.4	28817.5	-27.7	-41.2	26.0
330.4	29727.8	-29.4	-41.7	29.0
311.2	31127.3	-32.1	-44.1	29.0
305.0	31593.7	-33.5	-46.0	27.0
300.0	31975.7	-33.6	-46.7	25.0
292.6	32551.4	-34.7	-49.2	21.0
280.8	33493.5	-37.0		
250.0	36104.2	-43.4		
219.4	38961.4	-49.3		
200.0	40952.5	-51.3		
189.4	42111.5	-54.0		
171.4	44199.7	-59.1		
158.6	45795.9	-61.2		
150.0	46930.6	-63.6		
138.2	48579.3	-66.0		
123.2	50861.7	-69.0		
112.6	52635.4	-69.2		
107.8	53489.8	-71.2		
100.0	54958.2	-70.5		
87.2	57641.1	-70.5		
72.6	61262.6	-67.0		
70.0	61997.8	-62.4		
64.4	63697.4	-62.4		

STATION ALTITUDE 4051.00 FEET MSL
19 JUNE 81 1300 HRS MDT
ASCENSION NO. 50

SIGNIFICANT LEVEL DATA
17000 30050
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GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 10 CON'T

PRESSURE MILLIBARS	GEOMETRIC ALTITUDE MSL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT
61.8	64542.8	-59.8		
50.0	68951.5	-56.4		
44.6	71360.2	-54.4		
37.4	75102.7	-52.8		

STATION ALTITUDE 4051.00 FEET MSL
19 JUNE 81 1300 HRS M DT
ASCENSION NO. 50

UPPER AIR DATA
1700030050
JALLEN

TABLE 11

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
4051.0	876.0	36.8	10.2	20.0	979.3	687.7	200.0	1.9	1.000267
4500.0	862.8	31.9	4.5	17.8	981.8	681.7	185.2	2.7	1.000253
5000.0	848.3	30.7	2.9	17.0	969.2	680.3	176.6	3.7	1.000247
5500.0	833.8	29.3	2.0	17.2	957.1	678.6	171.7	4.8	1.000242
6000.0	819.5	27.9	1.0	17.4	945.3	677.0	166.9	5.1	1.000238
6500.0	805.5	26.6	.0	17.6	933.6	675.4	145.0	2.8	1.000234
7000.0	791.8	25.2	-.9	17.8	922.1	673.8	82.1	1.9	1.000230
7500.0	778.2	24.0	-1.9	17.9	910.0	672.4	32.1	3.2	1.000226
8000.0	764.7	23.4	-2.7	17.4	896.0	671.8	1.7	4.5	1.000221
8500.0	751.4	22.6	-3.8	16.7	883.0	670.8	341.6	5.8	1.000217
9000.0	738.3	20.8	-5.8	16.1	873.2	668.6	331.9	5.8	1.000212
9500.0	725.3	19.3	-6.7	16.4	862.2	666.9	326.9	5.5	1.000208
10000.0	712.5	17.9	-7.7	16.7	851.4	665.2	320.2	5.2	1.000205
10500.0	700.0	16.4	-8.7	17.0	840.8	663.5	297.7	5.0	1.000202
11000.0	687.5	15.1	-9.6	17.2	829.5	662.0	271.3	6.0	1.000198
11500.0	675.1	13.8	-10.5	17.5	818.3	660.5	252.2	8.3	1.000195
12000.0	663.0	12.5	-11.3	17.7	807.4	658.9	240.7	9.4	1.000192
12500.0	651.1	11.2	-12.3	17.9	796.6	657.4	232.3	10.3	1.000189
13000.0	639.3	9.9	-13.1	18.1	785.7	655.9	226.6	10.5	1.000186
13500.0	627.6	8.7	-14.0	18.4	774.8	654.4	225.4	10.1	1.000182
14000.0	616.2	7.4	-14.9	18.6	764.1	653.0	227.7	9.3	1.000179
14500.0	604.9	6.2	-15.8	18.8	753.5	651.5	231.4	8.8	1.000177
15000.0	593.8	4.9	-16.6	19.2	743.2	649.9	235.4	8.5	1.000174
15500.0	582.7	3.3	-17.0	20.7	733.4	648.1	238.0	9.0	1.000171
16000.0	571.8	1.8	-17.5	22.3	723.7	646.3	242.7	9.2	1.000169
16500.0	561.1	.3	-18.0	23.8	714.2	644.5	252.0	9.0	1.000167
17000.0	550.6	-1.3	-18.6	25.3	704.8	642.7	266.4	8.9	1.000164
17500.0	540.2	-2.5	-18.7	27.4	694.7	641.2	285.6	9.2	1.000162
18000.0	529.9	-3.5	-18.5	29.9	683.9	640.1	301.7	9.6	1.000160
18500.0	519.8	-4.8	-22.0	24.4	674.3	638.4	316.3	10.3	1.000156
19000.0	509.9	-5.0	-24.3	20.2	661.9	638.2	322.6	9.9	1.000152
19500.0	500.1	-5.1	-26.9	16.0	649.6	638.0	327.5	9.2	1.000148
20000.0	490.5	-6.3	-28.0	16.0	640.1	636.5	322.3	8.2	1.000146
20500.0	481.0	-7.4	-29.2	15.5	630.2	635.2	314.7	7.4	1.000143
21000.0	471.6	-8.4	-30.4	15.0	620.4	634.0	302.5	6.8	1.000141
21500.0	462.5	-9.5	-31.6	14.5	610.8	632.7	290.7	6.7	1.000138
22000.0	453.5	-10.5	-32.7	14.1	601.3	631.4	286.3	7.0	1.000136
22500.0	444.5	-11.7	-33.2	14.7	592.1	630.0	286.8	7.5	1.000134
23000.0	435.7	-12.9	-33.8	15.3	583.0	628.6	299.8	8.6	1.000132
23500.0	427.0	-14.1	-34.4	15.9	574.0	627.2	307.7	10.2	1.000130

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GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 11 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
24000.0	418.6	-15.2	-34.9	16.6	565.2	625.7	310.5	12.2	1.000128
24500.0	410.3	-16.4	-35.5	17.2	556.5	624.3	309.6	14.2	1.000126
25000.0	402.1	-17.6	-36.2	17.8	548.0	622.9	306.2	16.2	1.000124
25500.0	394.0	-18.8	-36.8	18.7	539.5	621.4	306.0	17.8	1.000122
26000.0	386.0	-20.1	-37.4	19.6	531.2	619.8	307.4	19.2	1.000120
26500.0	378.1	-21.4	-38.0	20.5	523.0	618.3	309.3	19.9	1.000118
27000.0	370.4	-22.6	-38.7	21.4	514.9	616.7	311.3	20.4	1.000116
27500.0	362.8	-23.9	-39.4	22.3	506.9	615.1	311.9	19.9	1.000114
28000.0	355.4	-25.2	-40.1	23.3	499.2	613.5	312.2	19.3	1.000112
28500.0	348.0	-26.7	-40.7	25.0	491.9	611.6	313.9	19.4	1.000111
29000.0	340.8	-28.0	-41.3	26.6	484.2	610.0	315.5	19.8	1.000109
29500.0	333.6	-29.0	-41.6	28.2	475.9	608.8	316.7	21.0	1.000107
30000.0	326.6	-29.9	-42.1	29.0	467.7	607.6	317.3	22.4	1.000105
30500.0	319.7	-30.9	-43.0	29.0	459.6	606.4	316.8	23.8	1.000103
31000.0	312.9	-31.9	-43.9	29.0	451.7	605.2	316.9	24.8	1.000101
31500.0	306.2	-33.2	-45.6	27.4	444.6	603.5	318.9	24.1	1.000100
32000.0	299.7	-33.6	-46.8	24.8	435.9	602.9	322.6	22.8	1.000098
32500.0	293.3	-34.6	-49.0	21.4	428.2	601.7	334.0	19.6	1.000096
33000.0	286.9	-35.8	-55.5	11.0**	421.1	600.2	348.4	17.3	1.000094
33500.0	280.7	-37.0			414.1	598.7	4.4	15.9	1.000092
34000.0	274.5	-38.2			407.1	597.1	19.4	15.7	1.000091
34500.0	268.5	-39.5			400.3	595.5	27.4	15.7	1.000089
35000.0	262.6	-40.7			393.5	594.0	32.4	15.8	1.000088
35500.0	256.8	-41.9			386.9	592.4	26.9	15.4	1.000086
36000.0	251.2	-43.1			380.4	590.8	20.4	15.0	1.000085
36500.0	245.5	-44.2			373.6	589.5	9.2	14.1	1.000083
37000.0	240.0	-45.2			366.8	588.1	357.5	13.8	1.000082
37500.0	234.6	-46.3			360.2	586.8	349.9	13.4	1.000080
38000.0	229.3	-47.3			353.6	585.5	341.9	13.3	1.000079
38500.0	224.1	-48.3			347.2	584.1	335.5	14.8	1.000077
39000.0	219.0	-49.3			340.9	582.8	330.3	16.4	1.000076
39500.0	214.0	-49.8			333.8	582.2	325.7	18.1	1.000074
40000.0	209.1	-50.3			326.9	581.5	321.8	19.9	1.000073
40500.0	204.3	-50.8			320.1	580.9	315.0	20.1	1.000071
41000.0	199.6	-51.4			313.5	580.1	307.1	20.0	1.000070
41500.0	194.9	-52.6			307.8	578.6	301.9	20.6	1.000069
42000.0	190.4	-53.7			302.3	577.1	298.2	21.3	1.000067
42500.0	185.9	-54.9			296.8	575.5	297.4	21.6	1.000066
43000.0	181.5	-56.2			291.4	573.9	300.0	21.5	1.000065
43500.0	177.2	-57.4			286.2	572.2	302.7	21.3	1.000064

** AT LEAST ONE ASSUMED RELATIVE HUMIDITY VALUE WAS USED IN THE INTERPOLATION.

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UPPER AIR DATA
1700030050
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 11 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
44000.0	173.0	-58.6			281.0	570.6	306.1	20.6	1.000063
44500.0	168.9	-59.5			275.4	569.4	309.7	19.9	1.000061
45000.0	164.9	-60.2			269.6	568.6	311.2	18.7	1.000060
45500.0	160.9	-60.8			264.0	567.7	312.8	17.6	1.000059
46000.0	157.0	-61.6			258.6	566.6	312.7	15.7	1.000058
46500.0	153.2	-62.7			253.6	565.2	312.1	13.7	1.000056
47000.0	149.5	-63.7			248.6	563.8	308.4	12.2	1.000055
47500.0	145.8	-64.4			243.4	562.8	302.4	11.1	1.000054
48000.0	142.2	-65.2			238.2	561.9	295.5	10.8	1.000053
48500.0	138.7	-65.9			233.2	560.9	289.5	11.5	1.000052
49000.0	135.3	-66.6			228.1	560.0	286.5	12.1	1.000051
49500.0	131.9	-67.2			223.2	559.1	296.5	11.9	1.000050
50000.0	128.7	-67.9			218.3	558.2	306.6	12.0	1.000049
50500.0	125.5	-68.5			213.6	557.3	317.8	11.9	1.000048
51000.0	122.3	-69.0			208.8	556.6	329.0	12.2	1.000046
51500.0	119.3	-69.1			203.6	556.5	329.2	12.0	1.000045
52000.0	116.3	-69.1			198.6	556.5	326.0	11.6	1.000044
52500.0	113.4	-69.2			193.6	556.4	322.8	11.3	1.000043
53000.0	110.5	-70.1			189.6	555.2	319.6	10.9	1.000042
53500.0	107.7	-71.2			185.9	553.6	318.6	10.6	1.000041
54000.0	105.0	-71.0			180.9	554.0	319.7	10.4	1.000040
54500.0	102.4	-70.7			176.2	554.3	319.7	10.4	1.000039
55000.0	99.8	-70.5			171.5	554.6	318.7	10.8	1.000038
55500.0	97.3	-70.5			167.2	554.6	317.8	10.9	1.000037
56000.0	94.8	-70.5			163.0	554.6	317.1	10.9	1.000036
56500.0	92.4	-70.5			158.9	554.6	315.9	11.0	1.000035
57000.0	90.1	-70.5			154.9	554.6	313.8	11.2	1.000034
57500.0	87.8	-70.5			151.0	554.6	312.6	11.5	1.000034
58000.0	85.6	-70.2			147.0	555.1	314.9	11.8	1.000033
58500.0	83.5	-69.7			142.9	555.7	317.2	12.1	1.000032
59000.0	81.4	-69.2			139.0	556.4	336.1	9.7	1.000031
59500.0	79.4	-68.7			135.2	557.0	2.8	8.8	1.000030
60000.0	77.4	-68.2			131.6	557.7	27.4	10.0	1.000029
60500.0	75.5	-67.7			128.0	558.4	43.9	12.7	1.000028
61000.0	73.6	-67.3			124.5	559.0	53.4	12.4	1.000028
61500.0	71.8	-65.5			120.4	561.4	63.4	11.7	1.000027
62000.0	70.0	-62.4			115.7	565.6	84.1	8.7	1.000026
62500.0	68.3	-62.4			112.9	565.6	126.8	7.3	1.000025
63000.0	66.6	-62.4			110.2	565.6	152.1	8.3	1.000025
63500.0	65.0	-62.4			107.5	565.6	163.0	8.8	1.000024

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106.49511 LON DEG

TABLE 11 CON'T

GEOMETRIC ALTITUDE MSL FEET	PRESSURE MILLIBARS	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT CENTIGRADE	REL.HUM. PERCENT	DENSITY GM/CUBIC METER	SPEED OF SOUND KNOTS	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS	INDEX OF REFRACTION
64000.0	63.5	-61.5			104.4	566.8	154.6	7.3	1.000023
64500.0	61.9	-59.9			101.2	568.9	108.1	5.8	1.000023
65000.0	60.5	-59.4			98.6	569.5	78.6	8.9	1.000022
65500.0	59.0	-59.1			96.0	570.0	73.7	13.7	1.000021
66000.0	57.6	-58.7			93.6	570.5	75.8	16.8	1.000021
66500.0	56.3	-58.3			91.2	571.0	85.7	17.5	1.000020
67000.0	54.9	-57.9			88.9	571.6	92.8	17.8	1.000020
67500.0	53.6	-57.5			86.6	572.1	95.7	16.0	1.000019
68000.0	52.3	-57.1			84.4	572.6	98.9	14.4	1.000019
68500.0	51.1	-56.7			82.3	573.1	101.0	13.6	1.000018
69000.0	49.9	-56.4			80.2	573.6	102.9	13.1	1.000018
69500.0	48.7	-55.9			78.1	574.2	97.7	14.3	1.000017
70000.0	47.6	-55.5			76.2	574.7	93.4	15.5	1.000017
70500.0	46.5	-55.1			74.2	575.3	90.1	17.8	1.000017
71000.0	45.4	-54.7			72.3	575.8	87.6	20.2	1.000016
71500.0	44.3	-54.3			70.5	576.3	88.8	19.9	1.000016
72000.0	43.3	-54.1			68.8	576.6	91.5	18.7	1.000015
72500.0	42.3	-53.9			67.2	576.8	91.5	17.9	1.000015
73000.0	41.3	-53.7			65.5	577.1	89.1	17.5	1.000015
73500.0	40.3	-53.5			64.0	577.4			1.000014
74000.0	39.4	-53.3			62.4	577.7			1.000014
74500.0	38.5	-53.1			60.9	578.0			1.000014
75000.0	37.6	-52.8			59.4	578.2			1.000013

STATION ALTITUDE 4051.00 FEET MSL
19 JUNE 81 1300 HRS MDT
ASCENSION NO. 50

MANDATORY LEVELS
1700030050
JALLEN

GEODETIC COORDINATES
33.16712 LAT DEG
106.49511 LON DEG

TABLE 12

PRESSURE MILLIBARS	GEOPOTENTIAL FEET	TEMPERATURE AIR DEGREES CENTIGRADE	TEMPERATURE DEWPOINT DEGREES CENTIGRADE	REL.HUM. PERCENT	WIND DATA DIRECTION DEGREES(TN)	WIND DATA SPEED KNOTS
850.0	4937.	30.9	3.0	17.	177.4	3.6
800.0	6700.	26.0	-.3	18.	124.5	2.2
750.0	8548.	22.4	-4.2	17.	340.6	5.8
700.0	10490.	16.4	-8.7	17.	297.9	5.0
650.0	12537.	11.1	-12.3	18.	231.8	10.3
600.0	14705.	5.6	-16.2	19.	233.2	8.6
550.0	17009.	-1.4	-18.6	25.	267.3	8.8
500.0	19478.	-5.1	-26.9	16.	327.5	9.2
450.0	22162.	-11.0	-32.9	14.	284.7	7.2
400.0	25092.	-17.9	-36.3	18.	305.6	16.7
350.0	28315.	-26.3	-40.6	25.	313.4	19.4
300.0	31913.	-33.6	-46.7	25.	321.8	23.0
250.0	36026.	-43.4			18.5	14.8
200.0	40855.	-51.3			308.1	20.0
175.0	43658.	-58.0			304.4	20.9
150.0	46805.	-63.6			309.4	12.4
125.0	50431.	-68.6			319.0	11.9
100.0	54790.	-70.5			318.8	10.7
80.0	59142.	-68.9			352.1	8.9
70.0	61787.	-62.4			82.2	8.9
60.0	64922.	-59.3			77.0	10.1
50.0	68694.	-56.4			102.9	13.1
40.0	73379.	-53.4				